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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/619,535	07/19/2000	Dr. Werner Groh	032745-020	2257

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BURNS DOANE SWECKER & MATHIS L L P
POST OFFICE BOX 1404
ALEXANDRIA, VA 22313-1404

EXAMINER

SALVATORE, LYNDIA

ART UNIT PAPER NUMBER

1771

DATE MAILED: 09/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

AS

Office Action Summary	Application No.	Applicant(s)	
	09/619,535	GROH ET AL.	
	Examiner	Art Unit	
	Lynda M Salvatore	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07/08/03.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10,12-18,40 and 41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10,12-18,40 and 41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendment and accompanying remarks have been carefully considered and entered. Claims 1 and 18 have been amended as requested. Applicant's arguments with respect to the 35 U.S.C. 112 2nd paragraph rejections of claims 16 and 40 as set forth in section 6 of the last Office Action are found persuasive. Thus, these rejections are withdrawn. Applicant's amendment to claim 18 is found sufficient to overcome the 35 U.S.C. 112 2nd paragraph rejection set forth in section 7 of the last Office Action. Thus, this rejection is also withdrawn. However, despite this advance in prosecution Applicant's amendments are not found to patently distinguish the claims over the prior art of record and Applicant's arguments are not found persuasive of patentability for reasons set forth herein below.

Claim Rejections - 35 USC § 112

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action.

3. Claims 10 stands rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention as set forth in section 6 of the last Office Action.

To reiterate, Applicant argues that those of ordinary skill in the art are well aware that techniques exist to thermally shrink fibers, which do not result in consolidation as well as techniques that do result in consolidation. This argument is not found persuasive on the grounds that the Applicant as not set forth which employed technique does not result in consolidation. The Examiner reviewed the disclosed various techniques for heat shrinking, however, the

Art Unit: 1771

Applicant fails to teach which technique does not result in consolidation. Thus, the Examiner maintains that the phrase "thermally shrunken" functions at least in part to consolidate the fibers. Further, if such methods exists which heat shrink fibers without consolidation, then the Examiner suggests to amend the claims such that they are commensurate in scope with the Applicant's arguments.

3. Claim 10 stands rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specifically, the Applicant's specification fails to teach a shrinking method that does not result in consolidation. The Applicant's specification teaches the application of heat, which is how the Baravain et al., reference below teaches imparting shrinking, and consolidation (Column 2, 63-65 and Column 3, 45-55).

Applicant argues that the Examiner is mistaken when claiming that the specification fails to teach a shrinking method that does not result in consolidation. According the specification set forth by the Applicant, consolidation of the layer of synthetic fibers can take place before, after or simultaneously with heat shrinking and be effected by calendaring at temperatures lower than that employed for heat-shrinking (Applicant's response, page 12). This argument is not found persuasive for reasons set forth above. The application of heat will function to consolidate the synthetic non-woven to some degree when the heat is sufficiently high to cause shrinkage.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Art Unit: 1771

5. Claim 1,3-9, 14-16,18 and 40 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Baravian et al., US 5,616,395 in view of Schops et al., US 6,235,657 as set forth in section 11 of the last Office Action.

Applicant amended claim 1 to include the limitation that a portion of the synthetic non-woven layer penetrates a side of the layer of glass fibers facing away from the layer of synthetic fibers and argues that no conditions for needle bonding are mentioned (Applicant's response, page 11). Though, Baravian et al., does not explicitly teach specific needling embodiments it is improper to ignore the disclosure directed to needle bonding regardless if the method is not exemplified. The fact remains that Baravian et al., teaches needle bonding as a means to join the two layers together. With regard to the limitation of the penetration of synthetic fibers into the glass layer, the Applicant argues that it is mere conjecture to assume that the synthetic fiber layer is the upper layer such that needling would pass a portion of the synthetic fibers into the glass fiber layer (Applicant's response, page 12). The Examiner acknowledges that Baravian et al., does not explicitly teach the orientation of the layers, however, it well known in the art that glass fibers are not needled due to the fact that they are too brittle and would break. Thus, it is obvious that the synthetic layer is the upper layer and one of ordinary skill in the art would be well aware of this simple fact. As such, the Examiner maintains that needling would inherently pass a portion of fibers from the first layer (i.e., the synthetic layer) to the second layer (i.e., glass layer), otherwise no bonding would occur.

Applicant also argues that Baravian et al., does not teach consolidation of the glass fiber layer, in all due respect, the Examiner maintains that Baravian et al., clearly teaches that second mineral layer preferably takes the form of a scrim of mineral fibers formed by wet or dry non-

Art Unit: 1771

woven processes, more particularly discontinuous glass fibers with chemical or thermal bonding (Column 3, line 65-Column 3, line 5). In this case, chemical bonding is interpreted as any type of resinous based binder (Emphasis added). Applicant further argues when the consolidation of the synthetic fiber takes place asserting that Baravian et al., teaches that consolidation takes place *before* assembly with the second glass fiber layer. The Examiner asserts that presently claim 1 does not imply that the heat shrinking occurs after needling, but only that it takes place. Thus, if heat shrinking after assembly with the second glass layer is material to the instant invention then it is suggested that the Applicant amend claim 1 so that it is commensurate in scope with the present arguments.

Applicant further argues that three layer laminates taught by Shops et al., are considered unsatisfactory for their purpose as a fire screen and as such no motivation exists to combine references (Applicant's response, page 13). The Applicant is invited to re-read the passage regarding two and three layer laminates taught by Baravain et al, in column 2, beginning at line 7. To summarize the passage states that two possible solutions exist to create a veritable screen. These solutions come in the form of either three layer or two layer reinforcement structures. Nowhere in the passage does it state definitively that a three layer laminate is not desired, rather it merely states that such a structure is not completely satisfactory and is not without difficulties. Such a disclosure cannot be construed as a teaching away just because it is not necessarily preferred. In fact, Baravian et al., also teaches away in some regards the two layer reinforcement stating that the two layer reinforcement has production difficulties. In this particular instance Baravain et al., is focused on improving two layer reinforcements, but clearly acknowledges that three layer structures exist. Such a disclosure cannot be ignored.

Art Unit: 1771

6. Claims 2,12 and 13 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Baravian et al., US 5,616,395 in view of Schops et al., US 6,235,657 as applied to claim 1 above and further in view of Heidel et al., US 5,171,629 as set forth in section 13 of the last Office Action.

Applicant argues that Baravian et al., does not teach consolidating the glass fiber layer. This argument is incorrect. The Examiner has already set forth above that the second mineral layer preferably takes the form of a scrim of mineral fibers formed by wet or dry non-woven processes, more particularly discontinuous glass fibers with chemical or thermal bonding (Column 3, line 65-Column 3, line 5). In this case, chemical bonding is interpreted by the Examiner as any type of resinous based binder, and said chemical bonding is considered equal to consolidation (Emphasis added).

7. Claim 17 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Baravian et al., US 5,616,395 in view of Schops et al., US 6,235,657 as applied to claim 1 above and further in view of Cochran et al., US 4,892,780 as set forth in section 15 of the last Office Action.

Applicant argues that the Cochran et al., teaches the use of E-glass fibers in example 15 to prepare a knitted glass layer and argues that there is no suggestion that said glass fibers could be used in the Baravian et al., invention (Applicant's response, page 17). This argument is not found persuasive on the grounds that it would be obvious to one having ordinary skill in the art that E-glass fibers can be used to form various textile structures not just knitted ones. As previously set forth, the fibrous substrate may be a knit, woven, or *non-woven* of high strength fibers, filaments, or *yarns of glass*, acrylics or carbon. Example 15 was cited to specifically evidence the use of E-glass fibers not to provide support for a specific structure. It is the position

Art Unit: 1771

of the Examiner that Cochran et al., already teaches the general disclosure of a non-woven made of yarns of glass. Thus based on the teachings of Cochran et al., and illustrative Example 15, one of ordinary skill in the art would readily recognize that a non-woven substrate could be made from yarns of E-glass.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lynda M Salvatore whose telephone number is 703-305-4070. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 703-308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Art Unit: 1771

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

September 12th, 2003

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TERREL MORRIS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700